

## ABSTRACT

# **METHOD AND APPARATUS FOR CONTROLLED CONTRACTION OF COLLAGEN TISSUE**

A method and apparatus applies radiant energy through the skin to underlying collagen tissue without substantially modifying melanocytes and other epithelial cells in the epidermis. A membrane is adapted to receive an electrolytic solution and become inflated to substantially conform a contacting exterior surface of the membrane to a skin layer. The membrane includes a cooling lumen for receiving cooling fluid. One or more thermal electrodes positioned in the membrane and transfers thermal energy to the electrolytic solution. The electrolytic solution and cooling fluid creates a reverse thermal gradient from the skin surface to the underlying collagen tissue. A thermal power source is coupled to the thermal electrodes, and a source of electrolytic solution is coupled to the membrane.

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